



UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
DEPARTMENT OF CHILDHOOD EDUCATION
AUGUST SPECIAL EXAMINATION 2018

PROGRAMME: B.Ed. Intermediate Phase.

MODULE: Science and Technology for the Intermediate Phase3.

CODE: SATINA3.

CAMPUS: SWC.

TIME: 2 Hours.

MARKS: 100.

EXAMINER: Dr. M.M.M. Kazeni.

EXTERNAL EXAMINER: Dr. P. Kawai (University of Pretoria).

(This paper consists of 2 pages and 4 questions).

INSTRUCTIONS:

1. Read the questions carefully.
2. Answer all the questions.
3. Number your answers correctly.
4. Write clearly and legibly.
5. Write your surname, name and student number on all answer books.

QUESTION 1- INTRODUCTION TO EARTH & SPACE SCIENCE. [25]

- 1.1 The Big Bang theory attempts to describe the origin of the universe.
Explain the events that took place after the 'Big Bang' explosion, which could have eventually led to the formation of the solar systems. (½ a page) (10)
- 1.2 Discuss the evidence that supports the Big Bang theory as a possible explanation of the origin of the universe. (½ a page) (10)
- 1.3 Describe the International Space Station (ISS) and three activities that take place there. (5)

QUESTION 2- SPACE SCIENCE. [25]

- 2.1 Describe the composition of our solar system. (1 Page) (13)
- 2.2 Scientists have recently advertised for a 'One way travel ticket to Mars'. Give four (4) reasons why Mars could be unsuitable for human habitation. (8)
- 2.3 Describe the following celestial bodies.
- 2.3.1 Asteroids. (2)
- 2.3.2 Meteorites. (2)

QUESTION 3- EARTH SCIENCE [26]

- 3.1 Name and give one feature of the four main layers of the earth's internal structure. (12)
- 3.2 The outer rigid layer of the earth is divided into several plate tectonics, which float on the earth's surface lower layer.
- 3.2.1 Name the eight main plate tectonics of the earth. (8)
- 3.2.2 Discuss the evidence that supports the theory that plate tectonics move around the surface of the Earth. (6)

QUESTION 4- WEATHER PHENOMENA. [24]

- 4.1 Define the following terms.
- 4.1.1 Atmospheric pressure. (2)
- 4.1.2 Weather radar. (2)
- 4.1.3 Jet stream. (2)
- 4.2 Discuss four (4) causes of change in weather patterns on Earth. (½ pages) (8)
- 4.3 Discuss five (5) uses of wind in human civilization. (½ pages) (10)

TOTAL MARKS: [100]